Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A management and administration system for identifying and visualizing ~~[[a]]~~ Packet over Synchronous Optical Network (PoS) channels in a data communications network, the system comprising:

   a. a first body of data link connectivity information for holding connectivity information ~~for~~ regarding a plurality of data links established in the ~~associated~~ data network, the connectivity information specifying data link terminations ~~including~~ having channel specifications, the connectivity information regarding each data link termination further specifying a port of a data network node on which a corresponding data link endpoint terminates, each port having a one of a channelized and unchannelized configuration, the channel specification for each unchannelized port including a virtual channel specification associated therewith; and

   b. a display interface showing a current state of the data network including ~~established~~ data links established between corresponding pairs of channelized and unchannelized ports on corresponding data network nodes.

~~wherein the connectivity information regarding data link terminations also specifies ports on which each data link of the plurality of data links terminates, the ports having a one of a channelized and unchannelized configuration, the channel specification for each unchannelized port including a virtual channel specification associated therewith.~~

2. (original) A management and administration system as claimed in claim 1, wherein the first body of connectivity information further comprises a data link record.

3. (original) A management and administration system as claimed in claim 1, wherein the first body of connectivity information further comprises a plurality of nodal data link records, each one of the nodal data link records being associated with a corresponding data network node in the data network.

4. (currently amended) A management and administration system as claimed in claim 1, further comprising a second body of connectivity information enabling the selection of data link terminations ~~for the establishment~~ of data links provisioned in the data network.

5. (currently amended) A management and administration system as claimed in claim 4, wherein connectivity information held in the second body of connectivity information specifies data link terminations down to a channel specification~~[[ ]]~~,

~~wherein~~ the connectivity information regarding data link terminations ~~also~~ further specifying ~~[[ies]]~~ ports on which each data link terminates, the ports having a one of a channelized and unchannelized configuration, the channel specification for each unchannelized port including a virtual channel specification associated therewith.

6. (withdrawn) A method of provisioning a data link in a data networking environment comprising the steps of:

   a. selecting a first and a second data link terminations from a selection group of data link terminations, specifications of the first and second data link terminations including channel specifications;

   b. validating the selected first and second data link terminations; and

   c. establishing a data link between the first and second data link terminations.

7. (withdrawn) A method as claimed in claim 6, wherein selecting the first data link termination having the channel specification, the method further comprises a step of selecting a first channel of a first channelized port corresponding to the first termination.

8. (withdrawn) A method as claimed in claim 6, wherein selecting the first data link termination having the channel specification, the method further comprises a step of selecting a first virtual channel of a first unchannelized port corresponding to the first termination.

9. (withdrawn) A method as claimed in claim 8, wherein prior to the selection of the first virtual channel of the first unchannelized port, the method further comprises a step of assigning a virtual channel to the first unchannelized port, the virtual channel having a data transport capacity substantially equal to the data transport capacity of the first unchannelized port.

10. (withdrawn) A method as claimed in claim 6, wherein selecting the second data link termination having the channel specification, the method further comprises a step of selecting a second channel of a second channelized port corresponding to the second termination.

11. (withdrawn) A method as claimed in claim 6, wherein selecting the second data link termination having the channel specification, the method further comprises a step of selecting a second virtual channel of a second unchannelized port corresponding to the second termination.

12. (withdrawn) A method as claimed in claim 11, wherein prior to the selection of the second virtual channel of the second unchannelized port, the method further comprises a step of assigning a virtual channel to the second unchannelized port, the virtual channel having a data transport capacity substantially equal to the data transport capacity of the second unchannelized port.

13. (withdrawn) A method as claimed in claim 6, wherein validating the selected first and second data link terminations, the method further comprises steps of checking for a match with respect to at least one of a data link capacity and a data transport protocol.

14. (withdrawn) A method as claimed in claim 6, wherein upon the establishment of the data link, the method further comprises a step of recording connectivity information regarding the established data link in a body of data link connectivity information.

15. (withdrawn) A method as claimed in claim 14, wherein subsequent to the establishment of the data link, the method further comprises a step of displaying the data link on a management and administration interface.

16. (withdrawn) A method as claimed in claim 15, wherein displaying the data link on the management and administration interface the method further comprises steps of:

a. determining a first data network node corresponding to the first data link termination;

b. determining a second data network node corresponding to the second data link termination; and

c. displaying a schematic representation of the established data link between schematic representations of the first and the second data network nodes.

17. (withdrawn) A method as claimed in claim 16, wherein determining the first data network node corresponding to the first data link termination, the method further comprises a step of examining the body of connectivity information.

18. (withdrawn) A method as claimed in claim 16, wherein determining the second data network node corresponding to the second data link termination, the method further comprises a step of examining the body of connectivity information.

wherein A method as claimed in claim 16, wherein displaying a schematic representation of the established data link between the fist and the second data network nodes, the method further comprises a step of displaying a aline connecting representations of the fist and the second data network nodes.

19. (withdrawn) A method as claimed in claim 16, wherein displaying a schematic representation of the established data link between the fist and the second data network nodes, the method further comprises a step of displaying data link identification information.

20. (withdrawn) A method as claimed in claim 16, wherein displaying a schematic representation of the established data link between the fist and the second data network nodes, the method further comprises a step of displaying data link data transport capacity information.

21. (new) A method of identifying and visualizing Packet over Synchronous Optical Network (PoS) channels in a data communications network, the method comprising:

a. selecting a data link from a plurality of data link specifications held in a body of data link connectivity information;

b. identifying a first and a second terminations of the selected data link, specifications of the first and second data link terminations having channel specifications, the connectivity information regarding each data link termination further specifying a port of a data network node on which a corresponding data link endpoint terminates, each port having a one of a channelized and unchannelized configuration, the channel specification for each unchannelized port including a virtual channel specification associated therewith; and

c. displaying a schematic representation of the data link on a management and administration interface showing a current state of the data network including data links.

22. (new) A method as claimed in claim 6, wherein identifying one of the first and the second data link port termination having a virtual channel specification, the method further comprises a step of employing the virtual channel ascribed to the corresponding unchannelized port for displaying the data link.

23. (new) A method as claimed in claim 22, wherein displaying the schematic representation of the data link terminating on an unchannelized port, the method further comprises displaying a data link termination icon indicating the virtual channelization of the unchannelized port.

24. (new) A method as claimed in claim 21, wherein displaying the data link on the management and administration interface the method further comprises:

a. identifying a first data network node corresponding to the first data link termination;

b. identifying a second data network node corresponding to the second data link termination; and

c. displaying schematic representations of the first and the second data network nodes along with the schematic representation of the data link therebetween.

25. (new) A method as claimed in claim 24, wherein identifying each of the first data network node corresponding to the first data link termination, and the second data network node corresponding to the second data link termination, the method further comprises a step of examining a body of network connectivity information.

26. (new) A method as claimed in claim 25, wherein displaying a schematic representation of the data link, the method further comprises displaying a line connecting representations of the fist and the second data network nodes.

27. (new) A method as claimed in claim 21, wherein displaying a schematic representation of the data link, the method further comprises determining and displaying data link identification information.

28. (new) A method as claimed in claim 21, wherein displaying a schematic representation of the data link, the method further comprises determining and displaying data link data transport capacity information.